Warning Impacts FAQ, Credits and Disclaimer

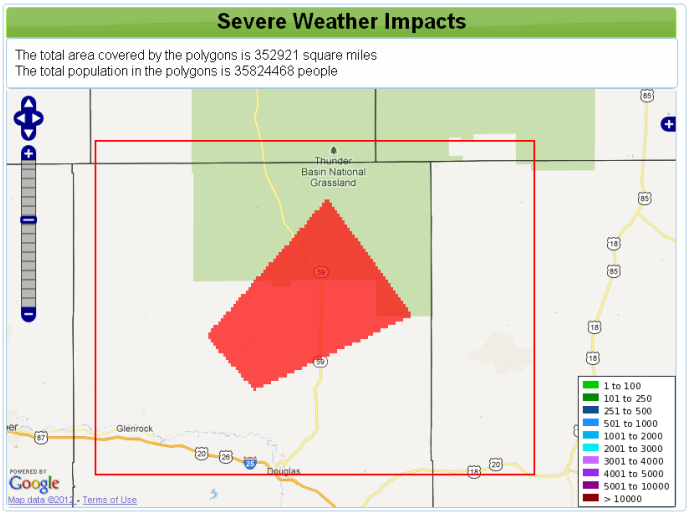
FAQ

What are the population values generated from?

The values population counts representing an average, or ambient, population distribution. An ambient population integrates diurnal movements and collective travel habits into a single measure (Dobson et al. 2000). Since natural or man made emergencies may occur at any time of the day, the goal of the LandScan model is to develop a population distribution surface in totality, not just the locations of where people sleep. Because of this ambient nature, care should be taken with direct comparisons of LandScan data with other population distribution surfaces. Kevin Scharfenberg made a presentation on this dataset at 2011 AMS Annual meeting and you can view that presentation at:
https://ams.confex.com/ams/91Annual/flvgateway.cgi/id/17545?recordingid=17545

How are the population values calculated?

The population values are calculated by converting the warning polygons to a 1 km gridded raster image (see image below). The warning polygon raster is then multiplied by the population raster and summed to calculate the population within the polygon. For multiple warning polygon calculations, the individual warning polygons are unioned into a single multi-polygon, which is then gridded. This eliminates double counting in the event of overlapping polygons. The waring polygons and population datasets are in the NAD83 coordinate system.



Why calculate the population in a warning?

The primary purpose for calculating the ambient population in a warning polygon is to provide situational awareness after a warning has been issued, particularly for emergency and disaster response agencies. In situations with numerous warnings in effect simultaneously, this tool aids officials in monitoring and preparing for a large response in the event strikes a heavily-populated

area. The population is calculated after a warning has been disseminated, so it is not considered during the warning decision-making process. It is NWS Policy to issue watches, advisories, and warnings for any threatened area regardless of the calculated population.

Where does the Interstate Highways, National Parks, and Railroad information come from?
The interstate highways, National Parks, and railroad data sets come from the National Transportation Atlas Database.

Where does the public venue information come from?
The public venue information was generated from the 2012 HSIP Gold data set. It contains stadiums and arenas from the NFL, NCAA, MLB, NASCAR, MLS and IRL. It also includes amusement parks, convention centers and other sports arenas.

How are the distances and areas calculated?
Distances and areas are calculated by transforming the dataset geometry to the US National Atlas Equal Area coordinate system.

What tools are used to create the web pages?
The web pages are generated from freely available tools, including:

- Postgresql/Postgis - database
- GDAL/OGR - raster and
- Numeric Python - array calculations
- OpenLayers - web mapping

CREDITS

The impact polygons are the combined effort of Kevin Scharfenberg and Brian Walawender with contributions from the following individuals.

- Iris Database - Aaron Sutula and Jason Burks
- Implementation into EDD - Jonathan Wolfe

DISCLAIMER